

On April 26, President Bush told the American Association of Community Colleges Annual Convention in Minneapolis: "There needs to be technical standards to make possible new broadband technologies, such as the use of high-speed communication directly over power lines. Power lines were for electricity; power lines can be used for broadband technology. So the technical standards need to be changed to encourage that."

Mr. Bush is wrong. Although universal broadband service is a worthy goal, using power lines to distribute broadband services (called Broadband over Power Lines, or BPL) is a bad idea that should not be encouraged. There are better ways to do it. As a federally licensed Amateur Radio operator who has passed a Federal Communications Commission (FCC) examination in radiocommunication technology, I can tell you why.

Power lines were designed to transmit electrical energy. They were not designed to transmit broadband signals, which is fact are radio-frequency (RF) signals. When a broadband signal is put on a power line, much of the RF energy leaks off the line and radiates, causing interference to nearby radio receivers. Interference has been documented at test sites throughout the country and overseas where BPL is in operation. Recordings of actual interference at several test sites are available at [www.arrl.org/bpl](http://www.arrl.org/bpl).

The nation's 680,000 radio amateurs are especially concerned about this interference because it affects the short waves -- a unique portion of the radio spectrum that supports long-distance, intercontinental radio communication. Licensed radio amateurs use these frequencies for hurricane reporting, disaster and emergency relief, and many other purposes in accordance with FCC regulations. The Amateur Radio Service is the only 100% failsafe emergency communications capability in the world. No matter what happens, radio amateurs will be able to communicate with one another without having to rely on the expensive and vulnerable infrastructure -- but we cannot maintain our emergency networks if BPL is deployed and interferes with the weak radio signals we are trying to hear.

In addition to amateur operation, the short waves are used for international broadcasting, aeronautical, maritime, and other services including the military. Depending on the frequencies in use, BPL interference also could wipe out radio communication for many of our nation's First Responders -- police, fire, and emergency medical personnel -- who use low-band VHF radios operating in the 30-50 megahertz (MHz) range.

Radio amateurs support expanded broadband services to consumers at lower cost. Indeed, they tend to be early adopters of new technology. However, there are ways to deliver broadband that do not pollute the radio spectrum as BPL does. These include fiber-to-the-home, cable, DSL, and Broadband Wireless Access. None of these technologies causes interference to short wave radio.

BPL is sometimes touted as a solution for rural areas. It is not. A BPL signal only carries a few thousand feet down a power line and then must be repeated. This requires a lot of hardware and will not be economic in areas with low population densities.

The FCC recognizes the interference potential of BPL and is in the midst of a rulemaking proceeding, ET Docket No. 04-37, that proposes new requirements and measurement guidelines for BPL systems. However, the FCC proposals do not go nearly far enough to protect over-the-air radiocommunication services.

In short, BPL has a major disadvantage that is not shared by other broadband technologies and that outweighs whatever benefit it may offer. National broadband telecommunications policy should not include support for BPL, but should focus on other, more appropriate technologies.

By encouraging broadband over power lines, the administration is heading in the wrong direction. Please do what you can to change its course. Thank you.

Sincerely,

David L. Mackey  
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